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DEPARTMENT OF ENERGY

[EERE-2021-BT-DET-0010]

Preliminary Analysis Regarding Energy Efficiency Improvements in the 2021 International Energy Conservation Code (IECC)

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notice of availability.

SUMMARY: The U.S. Department of Energy (DOE) is announcing the availability of a Preliminary Energy Savings Analysis of the 2021 International Energy Conservation Code (Preliminary Analysis). DOE welcomes written comments from interested parties on any subject within the scope of this Preliminary Analysis.

DATES: DOE will accept written comments and information on the Preliminary Analysis no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: A copy of the Preliminary Analysis is available at https://www.energycodes.gov/sites/default/files/documents/2021_IECC_PreliminaryDetermination_TSD.pdf. Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at <http://www.regulations.gov>. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments by email to the following address: 2021iecc2021det0010@ee.doe.gov. Include docket number **EERE-2021-BT-DET-0010** and/or RIN number 1904-AF15 in the subject line of the message. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or ASCII file format, and avoid the use of special characters or any form of encryption.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the

Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing Covid-19 pandemic. DOE is currently accepting only electronic submissions at this time. If a commenter finds that this change poses an undue hardship, please the parties listed below to discuss the need for alternative arrangements. Once the Covid-19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

Public Docket: The docket, which includes *Federal Register* notices, comments, and other supporting documents/ materials, is available for review at

<http://www.regulations.gov>. All documents in the docket are listed in the <http://www.regulations.gov> index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available. A link to the docket on the <http://www.regulations.gov> site can be found at: <http://www.regulations.gov/#!docketDetail;D=EERE-2021-BT-DET-0010>. The <http://www.regulations.gov> web page will contain instructions on how to access all documents, including public comments, in the docket. See section III for further information on how to submit comments through <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Mr. Jeremiah Williams; U.S.

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Mr. Matthew Ring; U.S. Department of Energy, Office of the General Counsel, 1000 Independence Avenue SW., GC-33, Washington, DC 20585; (202) 586-2555; Matthew.Ring@hq.doe.gov.

SUPPLEMENTARY INFORMATION:

- I. Background
- II. Discussion of Findings
- III. Public Participation

I. Background

Title III of the Energy Conservation and Production Act, as amended (ECPA), establishes requirements for building energy conservation standards, administered by the DOE Building Energy Codes Program. (42 U.S.C. 6831 *et seq.*) Section 304(a)(5)(A), as amended, of ECPA provides that whenever the CABO Model Energy Code, or any successor to that code, is revised, the Secretary of Energy (Secretary) must make a determination, not later than 12 months after such revision, whether the revised code would improve energy efficiency in residential buildings, and must publish notice of such determination in the *Federal Register*. (42 U.S.C. 6833(a)(5)(A)) If the Secretary determines that the revision of the CABO Model Energy Code, or any successor thereof, improves the level of energy efficiency in residential buildings then, not later than two years after the date of the publication of such affirmative determination, each State is required to certify that it has reviewed its residential building code regarding energy efficiency, and made a determination as to whether it is appropriate to revise its code to meet or exceed the provisions of the successor code. (42 U.S.C. 6833(a)(5)(B)) The International Energy Conservation Code (IECC) is the contemporary successor to the CABO Model Energy Code specified in ECPA.

In addition, on January 20, 2021, the President issued Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.” 86 FR 7037 (Jan. 25, 2021). The Executive Order directed DOE to consider publishing for notice and comment a proposed rule suspending, revising, or rescinding the final technical determination regarding the final technical

determination regarding the 2018 IECC by May 2021. Id. at 86 FR 7038. In response, DOE has conducted this preliminary analysis of the 2021 IECC so that DOE's determination under section 304(a) of ECPA reflects the most recent version of the IECC, and to facilitate State and local adoption of the 2021 IECC, which will provide greater energy savings for the nation's residential buildings.

The 2021 IECC (2021 edition), the most recent edition of the IECC, was published on January 29, 2021, triggering the statutorily required DOE review process. The IECC is developed through an industry consensus process administered by the International Code Council (ICC). The ICC has an established program for regular review of the IECC, identifying whether proposed changes have energy and cost impacts, and incorporating changes approved by public officials making up the ICC governmental voting body. Updated editions of the IECC are typically published every three years. More information on the ICC code development process is available at:

<https://www.iccsafe.org/codes-tech-support/codes/code-development-process/code-development-2/>.

II. Discussion of Findings

To meet the statutory requirement, DOE conducted a Preliminary Energy Savings Analysis of the 2021 International Energy Conservation Code (Preliminary Analysis) to quantify the expected energy savings associated with the 2021 IECC. The Preliminary Analysis indicates, of the 35 proposed code changes which directly impact energy use, 29 changes resulted in a *reduction* of energy use, with 6 changes projected to *increase* energy use.

DOE's Preliminary review and analysis of the 2021 IECC identified 11 key changes which are expected to have a significant and measurable impact on energy efficiency in residential buildings. These changes are expected to increase energy savings, impact a significant fraction of new homes, and can be reasonably quantified

through the established methodology. More information on these changes and their expected energy savings impacts are presented in a separate technical analysis, *Preliminary Energy Savings Analysis: 2021 IECC for Residential Buildings*¹.

Review of the 2021 IECC indicates the updated model code will increase energy efficiency in residential buildings. Residential buildings meeting the 2021 IECC (compared to the previous 2018 IECC edition) are expected to incur the following annual savings on a weighted national average basis:

- 9.38 percent of *site energy*;
- 8.79 percent of *source energy*;
- 8.66 percent of *energy costs*, and;
- 8.66 percent of *carbon emissions*.

The full Preliminary Analysis, including an assessment of the expected energy and energy cost impacts, is available via the DOE Building Energy Codes Program:

https://www.energycodes.gov/sites/default/files/documents/2021_IECC_PreliminaryDetermination_TSD.pdf. DOE welcomes written comments from interested parties on this preliminary determination and supporting technical analysis.

States can experience significant benefits by updating their codes to reflect current construction standards, a total estimated \$74.34 billion in energy cost savings and 435.43 MMT of avoided CO₂ emissions in residential buildings (cumulative 2010 through 2040), or \$3.14 billion in annual energy cost savings and 18.38 MMT in annual avoided CO₂ emissions (annually by 2030)².

III. Public Participation

¹

https://www.energycodes.gov/sites/default/files/documents/2021_IECC_PreliminaryDetermination_TSD.pdf.

² <https://www.energycodes.gov/about/results>. Financial benefits are calculated by applying historical and future fuel prices to site energy savings and by discounting future savings to 2016 dollars. Historical and future real fuel prices are obtained through EIA's AEO 2015 report (EIA 2015). A real discount factor of 5% is applied to discount future energy cost savings.

DOE will accept comments, data, and information regarding the Preliminary Analysis no later than the date provided in the **DATES** section at the beginning of this notice. Interested parties may submit comments, data, and other information using any of the methods described in the **ADDRESSES** section at the beginning of this notice.

Submitting Comments via <http://www.regulations.gov>

The <http://www.regulations.gov> web page will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies Office staff only. Your contact information will not be publicly viewable, except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment itself or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Do not submit to <http://www.regulations.gov> information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (CBI)). Comments submitted through <http://www.regulations.gov> cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section below.

DOE processes submissions made through <http://www.regulations.gov> before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your

comment may not be viewable for up to several weeks. Please keep the comment tracking number that <http://www.regulations.gov> provides after you have successfully uploaded your comment.

Submitting Comments via Email

Comments and documents submitted via email also will be posted to <http://www.regulations.gov>. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter, including your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments. Include contact information each time you submit comments, data, documents, and other information to DOE. No facsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, that are written in English, and that are free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign Form Letters

Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information

According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via

email two well-marked copies: one copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked non-confidential with the information believed to be confidential deleted. Submit these documents via email. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

Signing Authority

This document of the Department of Energy was signed on May 10, 2021, by Kelly Speakes-Backman, Principal Deputy Assistant Secretary and Acting Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, May 12, 2021.

Treena V. Garrett,

Federal Register Liaison Officer,

U.S. Department of Energy.